

WHAT IS CLAIMED IS:

Sub A2 → 1. A foamable drilling fluid, comprising:
 an aqueous solvent;
 a surfactant; and
 a polysaccharide.

2. The fluid of claim 1, wherein said polysaccharide is derived from a galactomannan gum.

Sub A3 → 3. The fluid of claim 2, wherein said galactomannan gum is selected from the group consisting of hydroxypropyl guar, guar gum, hydroxypropyl carboximethyl guar and mixtures thereof.

4. The fluid of claim 2, wherein said galactomannan gum is hydroxypropyl guar.

5. The fluid of claim 1, wherein said surfactant is an ethoxylated alcohol sulfate.

6. The fluid of claim 5, wherein said ethoxylated alcohol sulfate is selected from the group consisting of ammonium lauryl ether sulfate, sodium lauryl sulfate, ammonium lauryl sulfate, triethanolamine lauryl sulfate, sodium alpha-olefin sulfonate, and mixtures thereof.

7. The fluid of claim 1, wherein said polymer is present in an amount between about 1.5 and about 3.0% w/v.

8. The fluid of claim 1, further comprising a salt.

9. The fluid of claim 8, wherein said salt is a monovalent salt.

Sub A4
10. The fluid of claim 8, wherein said salt is selected from the group consisting of potassium chloride, sodium chloride, potassium acetate, acetate chloride and mixtures thereof.

11. The fluid of claim 8, wherein said salt is potassium chloride.

Sub A5
12. The fluid of claim 6, wherein said fluid contains said polymer in an amount between about 1.5 and about 3.0% w/v, said surfactant in an amount between about 0.3 and about 1.0 % w/v, and said salt in an amount between about 0.1% and about 0.5% w/v.

13. The fluid of claim 1, wherein the fluid is a foamed fluid containing a gas.

14. The fluid of claim 13, wherein said gas is selected from the group, consisting of nitrogen, air, natural gas, CO₂ and mixtures thereof.

Sub A6
15. The fluid of claim 13, wherein the foamed fluid has a viscosity of between about 1.15 and about 5.0 ppg.

16. The fluid of claim 13, wherein the foamed fluid has a viscosity of between about 25 and about 50 cP for qualities between about 80 and about 95%, at temperatures up to about 180°F.

17. The fluid of claim 13, wherein the foamed fluid is stable when exposed to oil and salt contaminants.

18. The fluid of claim 13, wherein the foamed fluid is stable when mixed with crude oil up to at least about 50% w/v of crude oil.

19. The fluid of claim 13, wherein the foamed fluid has a half life time of at least about 17 min.

20. The fluid of claim 13, wherein the foamed fluid is stable at temperatures up to at least about 180°F.

Sub A?

21. A foam drilling fluid, comprising:
- a liquid phase comprising an aqueous solvent, a polysaccharide and a surfactant; and
 - a gas phase selected from the group consisting of air, nitrogen, natural gas, CO₂ and combinations thereof.

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